

# REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14(a)

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In re Application of \_\_\_\_\_

Application Number

Filed

08/879475

7/20/97

Group Art Unit

Examiner

2111

Shin

Paper No. 1320

Assistant Commissioner for Patents  
 Washington, DC 20231

I hereby request access under 37 CFR 1.14(a)(3)(iv) to the application file record of the above-identified ABANDONED application, which is: (CHECK ONE)

\_\_\_ (A) referred to in United States Patent Number 5986435 column \_\_\_\_\_

\_\_\_ (B) referred to in an application that is open to public inspection as set forth in 37 CFR 1.11, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ on page \_\_\_\_\_ of paper number \_\_\_\_\_

\_\_\_ (C) an application that claims the benefit of the filing date of an application that is open to public inspection, i.e., Application No. \_\_\_\_\_ filed \_\_\_\_\_ or

\_\_\_ (D) an application in which the applicant has filed an authorization to lay open the complete application to the public.

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- |           |        |                  |
|-----------|--------|------------------|
| 3,740,636 | 6/1973 | Hogrefe et al. . |
| 3,754,182 | 8/1973 | Morris et al. .  |

(List continued on next page.)

- [75] Inventor: Steven E. Koenck, Cedar Rapids, Iowa**

## OTHER PUBLICATIONS

- [73] Assignee: **Intermec IP Corp., Woodland Hills, Calif.**

**Norand Corporation Specification Sheet for Norand 101-XL  
Portable Data System, 1978.**

- [ \* ] Notice: This patent is subject to a terminal disclaimer.

Norand Corporation Brochure regarding Norand "Sprint 100" Portable Order Entry Terminal, 1979.

Norand Corporation Specification Sheet for Norand 101XL  
"Alpha-1" Portable Data System, 1980.

- [21] Appl. No.: 09/205,518

*Primary Examiner—Peter S. Wong*

- [22] Filed: Dec. 3, 1998

Assistant Examiner—K. Shin

Attorney, Agent, or Firm—McAndrews, Held & Malloy,  
Ltd.

### Related U.S. Application Data

- [63] Continuation-in-part of application No. 09/082,061, May 20, 1998, Pat. No. 5,889,384, which is a continuation of application No. 08/879,475, Jun. 20, 1997, which is a continuation of application No. 08/841,665, Nov. 22, 1995, abandoned, which is a continuation of application No. 08/134,881, Oct. 12, 1993, Pat. No. 5,508,599, which is a continuation of application No. 07/769,337, Oct. 1, 1991, Pat. No. 5,278,487, which is a continuation of application No. 07/544,230, Jun. 26, 1990, abandoned, which is a division of application No. 07/422,226, Oct. 16, 1989, Pat. No. 4,961,043, which is a division of application No. 07/168,352, Mar. 15, 1988, Pat. No. 4,885,523, which is a continuation-in-part of application No. 06/944,503, Dec. 18, 1986, Pat. No. 4,737,702, which is a continuation-in-part of application No. 06/876,194, Jun. 19, 1986, Pat. No. 4,709,202, which is a division of application No. 06/797,235, Nov. 12, 1985, Pat. No. 4,716,354, which is a continuation-in-part of application No. 06/612,588, May 21, 1994, Pat. No. 4,553,081, which is a continuation-in-part of application No. 06/385,830, Jun. 7, 1982, Pat. No. 4,455,523.

[57] **ABSTRACT**

In an exemplary embodiment, a battery conditioning system monitors battery conditioning and includes a memory for storing data based thereon; for example, data may be stored representative of available battery capacity as measured during a deep discharge cycle. With a microprocessor monitoring battery operation of a portable unit, a measure of remaining battery capacity can be calculated and displayed. Where the microprocessor and battery conditioning system memory are permanently secured to the battery so as to receive operating power therefrom during storage and handling, the performance of a given battery in actual use can be accurately judged since the battery system can itself maintain a count of accumulated hours of use and other relevant parameters. In the case of a nonportable conditioning system, two-way communication may be established with a memory associated with the portable unit so that the portable unit can transmit to the conditioning system information concerning battery parameters (e.g. rated battery capacity) and/or battery usage (e.g. numbers of shallow discharge and recharge cycles), and after a conditioning operation, the conditioning system can transmit to the portable unit a measured value of battery capacity, for example.

- [51] Int. Cl.<sup>6</sup> ..... H02J 7/00  
[52] U.S. Cl. .... 320/136; 324/427  
[58] Field of Search ..... 320/136; 324/426,  
324/427

## [56] References Cited

## U.S. PATENT DOCUMENTS

3,683,258 8/1972 Harbourn .

**26 Claims, 24 Drawing Sheets**

